

Conclusions: The incidence of jailed DFA was acceptable and coverage of DFA in stenting the proximal SFA had higher primary patency, especially with intraluminal approach.

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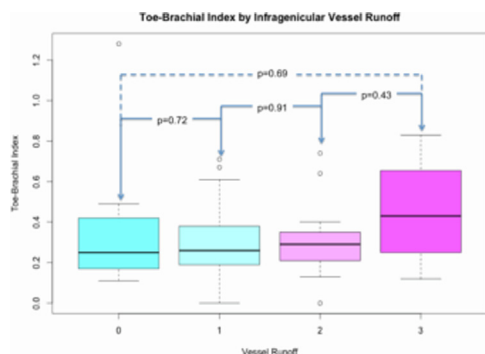
Correlation of Toe-Brachial Indices with Infragenicular Arterial Patency in Critical Limb Ischemia

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Background: Current ACC/AHA guidelines recommend toe-brachial indices (TBI) for diagnosis of peripheral arterial disease when ankle-brachial indices are unreliable due to non-compressible vessels. We sought to investigate how well TBI correlates with Rutherford classification and infragenicular arterial patency in critical limb ischemia (CLI).

Methods: Between July 2011 and February 2013, among patients who presented to the Cleveland Clinic Lower Extremity Wound Clinic with Rutherford Category 4-6 symptoms, 41 patients had TBI and lower extremity angiography performed. The correlation between TBI, Rutherford Category, and infragenicular arterial patency was evaluated.

Results: The median TBI for Rutherford Category 4, 5, and 6 symptoms was 0.32 ± 0.25 (SD), 0.24 ± 0.29 (SD), and 0.30 ± 0.20 (SD), respectively. The median TBI for 0, 1, 2, and 3-vessel runoff was 0.25 ± 0.36 (SD), 0.26 ± 0.21 (SD), 0.29 ± 0.20 (SD), and 0.43 ± 0.29 (SD), respectively. There was no statistically significant difference between TBI and Rutherford category ($p=0.42$) or number of patent runoff vessels below the knee ($p=0.80$).



Conclusions: In a small population of patients, TBI had a non-significant correlation with infragenicular runoff. TBI did not correlate with Rutherford classification. Patients with a high index of clinical suspicion for CLI should undergo further angiographic evaluation when revascularization may improve outcomes.

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Pooled Analysis of the CONFIRM Registries: Outcomes in Elderly Patients Treated with Orbital Atherectomy for Peripheral Arterial Disease

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Background: The elderly represent a growing population of patients in the community. There is a paucity of data about the outcomes of elderly patients with peripheral arterial disease who undergo orbital atherectomy.

Methods: Our analysis of the CONFIRM I-III registries includes 2995 real-world patients (4557 lesions) with 1753 patients <75 years of age (2637 lesions) and 1753 patients ≥75 years of age (1920 lesions) treated with orbital atherectomy. The primary endpoint was the composite of dissection, perforation, slow flow, vessel closure, spasm, embolism, and thrombus formation.

Results: Patients ≥75 years of age had a high proportion of females (47.5% vs. 35.3%, $p<0.001$), more patients with critical limb ischemia, longer mean lesion length (75.0 ± 74.1 vs. 69.9 ± 68.9 mm, $p=0.01$), and more treatment location below the knee (38.4% vs. 34.1%, $p<0.001$). Patients <75 years of age and ≥75 years of age had similar rates of the primary endpoint (22.0% vs. 21.3%, $p=0.81$), dissection (11.4% vs. 10.5%, $p=0.72$), vessel closure (1.7% vs. 1.1%, $p=0.13$), spasm (6.3% vs. 6.4%, $p=0.96$), and embolism (2.5% vs. 1.6%, $p=0.31$). Patients ≥75 years of age had less incidence of thrombus formation (0.9% vs. 1.6%, $p=0.03$) but higher perforation rate (1.2% vs. 0.4%, $p=0.007$) and a trend towards a higher rate of slow flow (5.3% vs. 4.0%, $p=0.08$).

Conclusions: Plaque modification with orbital atherectomy provided similar clinical outcomes in the patients <75 years of age and ≥75 years of age despite the elderly having unfavorable baseline clinical and lesion characteristics including more patients with critical limb ischemia, longer lesions, and treatment below the knee. The higher rates of perforation and trend towards increased slow flow may be explained by more extensive disease and smaller vessels.

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Long-term Outcomes of Self-Expanding Nitinol Stent Implantation for Chronic Total Occlusion of the Superficial Femoral and Proximal Popliteal Artery

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Background: Although recent guideline show expanded indication of endovascular therapy (EVT) for superficial femoral and proximal popliteal artery (SFPA) lesion, only secondary patency rate after self-expanding nitinol stent implantation is comparable for vein-graft bypass. Long-term outcomes are necessary for stent implantation to be considered as first-line therapy. This study investigated the long-term patency rates and predictors of restenosis after self-expanding nitinol stent implantation for chronic total occlusion (CTO) in SFPA lesions.

Methods: From January 2004 to December 2011, 2742 patients with peripheral artery disease of SFPA lesion 3471 limbs underwent EVT with a self-expanding nitinol stent at 13 institutions in Japan. Of the cohort, 1036 patients, 1169 limbs, had stents implanted for CTOs in the SFPA and were followed as long as 8 years (mean 899 ± 607 days). We retrospectively investigated baseline characteristics, patency rates, clinical outcomes and predictors of loss of primary patency.

Results: Mean age was 73 ± 9 years and 28% were female patients. Fifty-nine percent of the patients had diabetes mellitus and 27% were patients with critical limb ischemia. Occluded length was 184 ± 85 mm, 74% was TASC II type C, D lesion. Mean total stent length was 203 ± 89 mm and mean stent diameter was 6.7 ± 0.8 mm, mean final balloon diameter was 5.2 ± 0.8 mm. Fifty-two percent administered cilostazol. Incidence of stent fracture was 6%. Primary, assisted primary, secondary patency rates were 42%, 63%, 76%, respectively. Mortality rate was 14%, 2.5% went to surgical bypass, 2.7% had major amputation. In the multivariate analysis, stent fracture (OR 2.52; $p=0.0016$), female gender (OR 1.73; $p=0.0005$), use of distal puncture technique (OR 1.50; $p=0.0096$), diabetes mellitus (OR 1.43; $p=0.0148$), final balloon diameter (OR 0.23; $p=0.0075$), administration of cilostazol (OR 0.65; $p=0.0052$) and use of IVUS (OR 0.71; $p=0.0342$) were factors strongly associated with loss of primary patency.

Conclusions: Although primary patency was low, secondary patency rate was acceptable.

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Catheter directed thrombolysis in deep venous thrombosis with or without pulmonary thromboembolism

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Background: As deep venous thrombosis (DVT) treatment with anticoagulation does not resolve the thrombus formed in the vein, we wanted to study the result of catheter directed thrombolysis (CDT) in patients with acute DVT with or without pulmonary thromboembolism (PTE).

Methods: We retrospectively analysed the data of patients who presented with acute (< 10 days) or sub-acute (< 21 days) or acute on chronic DVT with or without PTE and were given CDT through Multi-Side port Catheter Infusion Sets Dual Check Valve 5F perfusion catheter (65 or 100cm from Cook's company), in our unit in the year 2012. CDT was done with streptokinase, 250,000 U as a loading dose over 30 minutes, followed by 100,000 U/h over 24 hours. CT pulmonary angio and venous colour Doppler was done before and 24 hrs after CDT was done. Success of CDT was defined as complete or partial depending on complete or reduction of thrombus burden in pulmonary arteries &/or deep veins.

Results: A total of 22 patients presented with Acute DVT in our unit [15 (68.2%) males and 7 (31.8%) females with mean age of 42.6 ± 13.6 yrs] in 2012. Out of them 11 (50%) had PTE, 6 massive and 5 sub massive and 9 had PAH. 14(63.6%) had Acute, 4 (18.2%) had sub-acute & 4 (18.2%) had acute on chronic DVT. 8 patients had predisposing factors (immobilization 4, adrenal adenoma 1, hyperhomocysteinemia 1, haemodialysis related 1, venous stenosis 1). Simultaneously IVC filter implantation in 12 (54.5%) and venous stenting in one patient was done. After 24 hrs of CDT, 11 (50%) DVT patients had complete resolution of thrombus and 11 (50%) had partial resolution (even in this group proximal thrombus in iliac veins was disappeared in all except one). Out of 11 patients who had PTE, 8 had complete resolution of thrombus and 3 had partial. Pulmonary artery pressure normalized in 7 (79- 77.8%). In 3 patients IVC filters were retrieved. One patient had puncture site hematoma which was managed conservatively. No fatal complication was noted.